

**Listing of the Claims:**

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1-74. (Canceled)

1      75. (Currently Amended) A method of reducing traffic in a ~~decentralised~~  
2      decentralized peer-to-peer network, said peer-to-peer network operating over an  
3      underlying network comprising first and second network portions, the method  
4      comprising:

5                identifying, with an Internet Service Provider (ISP) router, whether  
6                messages in the first network portion are peer-to-peer messages or other messages;  
7                ~~routing a-all peer-to-peer message messages in one of said network portions~~  
8                ~~the first network portion with an intended destination in the other of said network~~  
9                ~~portions-second network portion outside of a network of an Internet Service~~  
10               ~~Provider (ISP) to a gateway between peer-to-peer nodes residing on said first and~~  
11               ~~second network portions; and~~

12               ~~controlling transport of said message-peer-to-peer messages at said gateway~~  
13               ~~to limit propagation of said message-peer-to-peer messages into said other of said~~  
14               ~~network portions-second network portion, without limiting propagation of the other~~  
15               ~~messages into the second network portion.~~

1 76. (Currently Amended) ~~A method as claimed in The method of claim 75,~~  
2 wherein said first network portion comprises a portion of said underlying network  
3 managed by ~~a first entity the ISP~~ and said second network portion comprises a  
4 portion of said underlying network ~~not managed by the ISP that is connected to said~~  
5 first network portion across a boundary.

1 77. (Currently Amended) ~~A method as claimed in The method of claim 76, further~~  
2 comprising:

3 ~~implemented to limit limiting~~ a number of peer-to-peer connections across  
4 said boundary to a permitted maximum.

1 78. (Currently Amended) ~~A method as claimed in The method of claim 75,~~  
2 wherein said transport controlling further comprises:

3 blocking said ~~message peer-to-peer messages~~ at said gateway.

1 79. (Currently Amended) ~~A method as claimed in The method of claim 75,~~  
2 wherein said transport controlling further comprises:

3 redirecting said ~~message peer-to-peer messages~~ to a peer-to-peer node within  
4 said ~~one of said network portions~~ first network portion.

1 80. (Currently Amended) ~~A method as claimed in The method of claim 75,~~  
2 wherein said transport controlling further comprises:

3 responding to said message-peer-to-peer messages from said gateway.

1 81. (Currently Amended) A method as claimed in The method of claim 80  
2 wherein said message comprises a query peer-to-peer messages comprise queries,  
3 and wherein said responding further comprises:

4 sending a response to said query queries comprising cached data derived  
5 from previous response responses to the queries.

1 82. (Currently Amended) A method as claimed in The method of claim 80,  
2 wherein said message comprises a file request peer-to-peer messages comprise file  
3 requests, and wherein said responding further comprises:

4 sending a response to said file request requests comprising previously cached  
5 data for a requested file.

1 83. (Currently Amended) A method as claimed in The method of claim 75,  
2 wherein said message comprises a file request message peer-to-peer messages  
3 comprises file request messages, and wherein said controlling further comprises:

4 modifying a response to a previous file search request such that said response  
5 does not indicate that a requested file may be found in said other of said network  
6 portions second network portion.

1 84. (Currently Amended) ~~A method as claimed in The method of~~ claim 83,  
2 wherein a-said requested file is identified by a hash value.

1 85. (Currently Amended) ~~A method as claimed in The method of~~ claim 83, further  
2 comprising:

3       storing requested files in a cache, and wherein said response is modified to  
4 refer to said cache.

1 86. (Currently Amended) ~~A method as claimed in The method of~~ claim 83,  
2 wherein said underlying network comprises a third network portion, and wherein  
3 said modifying further comprises:

4       modifying said response to indicate that said requested file is obtainable from  
5 a peer-to-peer node located on said third network portion.

1 87. (Currently Amended) ~~A method as claimed in The method of~~ claim 75,  
2 wherein said physical network comprises a third network portion, wherein use of  
3 each of said network portions has an associated cost, wherein data transport over  
4 said third network portion has a cost less than a cost associated with said ~~other of~~  
5 ~~said network portions~~ second network portion, and wherein said controlling further  
6 comprises:

7       directing said message-peer-to-peer messages into said third network portion.

1       88. (Currently Amended) A method as claimed in The method of claim 75,  
2       wherein a said peer-to-peer message has a message identifier messages have  
3       message identifiers, and wherein said controlling further comprises:

4              storing said message identifier identifiers for said message peer-to-peer  
5       messages;

6              monitoring message identifiers of the peer-to-peer messages passing through  
7       said gateway to produce identified messages;[[,]] and

8              limiting propagation of said identified message messages such that said  
9       message passes messages pass between said first and second network portions no  
10      more than a permitted maximum number of times.

1       89. (Currently Amended) A method as claimed in The method of claim 88,  
2       wherein said permitted maximum number of times is one.

90-91. (Canceled).

1       92. (Currently Amended) A computer network message controller for reducing  
2       that reduces traffic in a decentralised decentralized peer-to-peer network, said peer-  
3       to-peer network operating over a physical network comprising first and second  
4       network portions, said network message controller comprising:

5              a router that identifies whether messages in the first network portion are  
6       peer-to-peer messages or other messages and routes all peer-to-peer messages in the

7        first network portion for routing a peer-to-peer message in one of said first network  
8        portions with an intended destination in the other of said network portions second  
9        network portion outside of a network of an Internet Service Provider (ISP) to a  
10      gateway between peer-to-peer nodes residing on said first and second network  
11      portions; and

12        a gateway controller configured to control that controls transport of said  
13        message peer-to-peer messages into said other of said network portions second  
14        network portion, without limiting propagation of the other messages into the second  
15        network portion.

1        93. (Currently Amended) A computer network message controller as claimed in  
2        The computer network message controller of claim 92, wherein said first network  
3        portion comprises a portion of said physical network managed by a first entity the  
4        ISP and said second network portion comprises a portion of said physical network  
5        not managed by the ISP that is connected to said first network portion across a  
6        boundary.

1        94. (Currently Amended) A computer network message controller as claimed in  
2        The computer network message controller of claim 93, wherein said gateway  
3        controller is configured to limit limits a number of peer-to-peer connections across  
4        said boundary to a permitted maximum.

1       95. (Currently Amended) ~~A computer network message controller as claimed in~~  
2       The computer network message controller of claim 92 wherein said gateway  
3       controller is configured to block said message blocks the peer-to-peer messages at  
4       said gateway.

1       96. (Currently Amended) ~~A computer network message controller as claimed in~~  
2       The computer network message controller of claim 92 wherein said gateway  
3       controller is configured to redirect said message redirects the peer-to-peer messages  
4       to a peer-to-peer node within said one of said network portions first network  
5       portion.

1       97. (Currently Amended) ~~A computer network message controller as claimed in~~  
2       The computer network message controller of claim 92 wherein said gateway  
3       controller is configured to respond to said message responds to the peer-to-peer  
4       messages.

1       98. (Currently Amended) ~~A computer network message controller as claimed in~~  
2       The computer network message controller of claim 97, further comprising:  
3               a cache to store that stores data, wherein said message comprises a query  
4       peer-to-peer messages comprise queries, and wherein said gateway controller is  
5       configured to send sends a response to said query queries including data from said  
6       cache.

1 99. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 The computer network message controller of claim 97 wherein said message  
3 comprises a file request peer-to-peer messages comprise file requests, further  
4 comprising:

5       a cache ~~to store~~ that stores data derived from previous responses to file  
6 requests, and wherein said gateway controller ~~is configured to send~~ sends a  
7 response to said file request including data from said cache.

1 100. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 The computer network message controller of claim 92, wherein said message  
3 comprises a file request message peer-to-peer messages comprise file request  
4 messages, and wherein said gateway controller ~~is configured to modify~~ modifies a  
5 response to a previous file search request such that said response does not indicate  
6 that a requested file may be found in ~~said other of said network portions~~ second  
7 network portion.

1 101. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 The computer network message controller of claim 100, wherein a ~~said requested~~  
3 file is identified by a hash value.

1 102. (Currently Amended) ~~A computer network message as claimed in The~~  
2 ~~computer network message controller of claim 100, further comprising:~~

3 a cache ~~for storing that stores~~ requested files, and ~~wherein~~ said  
4 gateway controller ~~is configured to modify~~ ~~modifies~~ said response to refer to said  
5 cache.

1 103. (Currently Amended) ~~A computer network message as claimed in The~~  
2 ~~computer network message controller of claim 92 wherein said underlying network~~  
3 ~~further comprises:~~

4 a third network portion, ~~and wherein~~ said gateway controller ~~is configured to~~  
5 ~~modify~~ ~~modifies~~ said response to indicate that said requested file is obtainable from  
6 a peer-to-peer node located on said third network portion.

1 104. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 ~~The computer network message controller of claim 92, wherein a~~ said peer-to-peer  
3 ~~message has a message identifier~~ ~~messages have message identifiers~~, and wherein  
4 said gateway controller ~~is configured to store~~ ~~stores~~ said message identifier  
5 ~~identifiers~~ for said ~~message~~ ~~peer-to-peer messages~~, ~~monitor~~ ~~monitors~~ message  
6 ~~identifiers of the peer-to-peer messages passing through said gateway~~ ~~to produce~~  
7 ~~identified messages~~, and ~~limit~~ ~~limits~~ propagation of said identified message  
8 ~~messages such that said message passes~~ ~~identified messages pass~~ between said first  
9 and second network portions no more than a permitted maximum number of times.

1 105. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 The computer network message controller of claim 104, wherein said permitted  
3 maximum number of times is one.

1 106-107. (Canceled).

1 108. (Currently Amended) ~~A computer network message controller as claimed in~~  
2 The computer network message controller of claim 92, wherein said gateway  
3 controller further comprises:

4       a processor, and

5       a program memory storing processor control code coupled to said processor to  
6 load and implement said code, said code comprising code to configure said gateway  
7 controller to operate as claimed in claim 92.

1 109. (Canceled).

1 110. (Currently Amended) A gateway controller, ~~in particular for the computer~~  
2 ~~network message controller of claim 92, for reducing that reduces traffic in a~~  
3 ~~decentralised decentralized~~ peer-to-peer network operating over an underlying  
4 network comprising first and second network portions, the controller being

5 ~~configured for operation~~ operating at a gateway between peer-to-peer nodes residing  
6 on said first and second network portions, the gateway controller comprising:

7       an interface for said first and second network portions, ~~for receiving a~~ that  
8 receives all peer-to-peer message messages in one of said ~~the~~ first network portions  
9 portion with an intended destination in the ~~other~~ of said ~~second~~ network portions  
10 portion outside of a network of an Internet Service Provider (ISP), wherein a router  
11 identifies whether messages in the first network portion are peer-to-peer messages  
12 or other messages; and

13       a controller ~~configured to control transport of said message into said other of~~  
14 ~~said network portions~~ that limits propagation of the peer-to-peer messages into the  
15 second network portion without limiting propagation of the other messages into the  
16 second network portion.

1     111. (Currently Amended) ~~A gateway controller as claimed in~~ The gateway  
2 ~~controller of~~ claim 110, wherein said controller is configured to block said message  
3 blocks the peer-to-peer messages at said gateway.

1     112. (Currently Amended) ~~A gateway controller as claimed in~~ The gateway  
2 ~~controller of~~ claim 110, wherein said controller is further configured to redirect a  
3 said message ~~redirects the peer-to-peer messages~~ to a peer-to-peer node within said  
4 one of said first network portions portion.

1 113. (Currently Amended) ~~A gateway controller as claimed in The gateway~~  
2 ~~controller of claim 110, wherein said controller is further configured to respond to a~~  
3 ~~said message responds to the peer-to-peer messages.~~

1 114. (Currently Amended) ~~A gateway controller as claimed in The gateway~~  
2 ~~controller of claim 113, further comprising:~~

3 a query cache ~~to store that stores~~ data derived from responses to queries, and  
4 wherein said controller ~~is configured to respond responds~~ to a ~~said query the queries~~  
5 using data from said query cache, ~~wherein the peer-to-peer messages comprise~~  
6 ~~queries.~~

1 115. (Currently Amended) ~~A gateway controller as claimed in The gateway~~  
2 ~~controller of claim 113, further comprising:~~

3 a file request cache ~~to store that stores~~ data derived from responses to file  
4 requests, and wherein ~~the peer-to-peer messages comprise file requests and~~ said  
5 controller ~~is configured to respond responds~~ to a ~~said file request requests~~ using  
6 data from said file request cache.

116. (Canceled).

1 117. (Currently Amended) ~~A gateway controller as claimed in The gateway~~  
2 ~~controller of claim 110, wherein said message comprises a file request message~~

3        peer-to-peer messages comprise file request messages, and wherein said controller  
4        is configured to modify modifies a response to a previous file search request such  
5        that said response does not indicate that a requested file may be found in said either  
6        of said network portions second network portion.

1        118. (Currently Amended) A gateway controller as claimed in The gateway  
2        controller of claim 117, wherein a-said requested file is identified by a hash value.

1        119. (Currently Amended) A gateway controller as claimed in The gateway  
2        controller of claim 117, further comprising:

3              a cache for storing that stores requested files, and wherein said controller is  
4        configured to modify modifies said response to refer to said cache.

1        120. (Currently Amended) A gateway controller as claimed in The gateway  
2        controller of claim 110, wherein said underlying network further comprises:

3              a third network portion, and wherein said controller is configured to modify  
4        modifies said response to indicate said requested file is obtainable from a peer-to-  
5        peer node located on said third network portion.

1        121. (Currently Amended) A gateway controller as claimed in The gateway  
2        controller of claim 110, wherein a-said peer to peer message has a message  
3        identifier the peer-to-peer messages have message identifiers, and wherein said

4 controller is configured to store stores said message identifier for said message  
5 identifiers for the peer-to-peer messages, monitor monitors the message identifiers  
6 of messages the peer-to-peer messages passing through said gateway to produce  
7 identified messages, and limit limits propagation of said identified message  
8 messages such that said message passes peer-to-peer messages pass between said  
9 first and second network portions no more than a permitted maximum number of  
10 times.

1 122. (Currently Amended) A gateway controller as claimed in The gateway  
2 controller of claim 121, wherein said permitted maximum number of times is one.

1 123. (Currently Amended) A gateway controller as claimed in The gateway  
2 controller of claim 110, wherein said first network portion comprises a portion of  
3 said underlying network managed by a first entity the ISP and said second network  
4 portion comprises a portion of said underlying network not managed by the ISP  
5 that is connected to said first network portion across a boundary, and wherein said  
6 controller is configured to provide provides a limited number of peer-to-peer  
7 connections across said boundary.

124-125. (Canceled).

1 126. (Currently Amended) ~~A gateway controller as claimed in The gateway~~  
2 ~~controller of claim 110, wherein said controller further comprises:~~

3 a processor;[[,]] and

4 a program memory storing processor control code coupled to said processor to  
5 load and implement said code, said code comprising code to configure said controller  
6 to control transport of said message into said other of said network portions.

127-148. (Canceled).